

Notice of Allowability

Application No.

10/676,736

Applicant(s)

SHIM ET AL.

Examiner

Nitin Parekh

Art Unit

2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 07-22-04.
2. ☒ The allowed claim(s) is/are 1,2,4-6 and 8-10.
3. ☒ The drawings filed on 30 September 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 4
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Nitin Parekh
Nitin Parekh
Patent Examiner
Technology Center 2800

DETAILED ACTION

Allowable Subject Matter

1. Claims 1, 2, 4-6 and 8-10 are allowed.

Claims 3, 7 and 11-20 have been canceled.

Examiner's Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

- A. Cancel claims 3, 7 and 11-20.
- B. Claim 1, line 1: Delete "comprising:" and insert --- "comprising steps of:"
- C. Claim 1, line 5: Insert --- "wherein the step of supporting the interposer further comprises supporting the interposer on a metallic stiffener having a plurality of legs contacting the substrate and supporting the metallic stiffener on the substrate;" --- between "substrate" and "and".
- D. Claim 4, line 1: Delete "claim 3" and insert --- "claim 1".
- E. Claim 5, line 1: Delete "claim 3" and insert --- "claim 1".
- F. Claim 6, line 1: Delete "comprising:" and insert --- "comprising steps of:"
- G. Claim 6, line 5: Insert --- "wherein the step of supporting the interposer further comprises supporting the interposer on a plane on the metallic stiffener, the metallic stiffener having a plurality of legs contacting the

substrate and supporting the metallic stiffener on the substrate;" — at the end of line 5 after "substrate".

H. Claim 8, line 1: Delete "claim 7" and insert — "claim 6".

I. Claim 9, line 1: Delete "claim 7" and insert — "claim 6".

Authorization for this examiner's amendment was given in a telephone interview with Mikio Ishimaru on 10-15-04.

Reasons for Allowance

3. The following is an examiner's statement of reasons for allowance:

The references of record do not teach either singularly or in combination at least the limitations "supporting an interposer above the first semiconductor device opposite the substrate; electrically connecting the interposer to the substrate; wherein the step of supporting the interposer further comprises supporting the interposer on a metallic stiffener having a plurality of legs contacting the substrate and supporting the metallic stiffener on the substrate" in a method of fabricating a stacked package having a first semiconductor device on a substrate, an interposer above the first semiconductor device and a second semiconductor device on the interposer.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should

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preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References A and B are cited as being related to stacked devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin Parekh whose telephone number is 571-272-1663. The examiner can normally be reached on 09:00AM-05:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on 571-272-1732. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9318.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

NP

10-15-04

Nitin Parekh
NITIN PAREKH

PATENT EXAMINER

TECHNOLOGY CENTER 2800